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ABSTRACT

This study guide for students in a basic training program for accident investigation is intended for use with lesson plans for the instructor and a manual for administrators and planners, available as VT 019 457 and VT 019 455, respectively. As part of a curriculum package developed by the Center for Vocational and Technical Education after a nationwide survey, this document contains a rationale detailing the needs for accident investigation technicians, an instructional outline, a course description, extensive student worksheets, and appended resource materials. Included in this guide, which is 3-hole punched for insertion into a notebook, are a bibliography, teaching suggestions, and an instructor rating sheet for student use. Intended to develop entry-level skills and to train technicians to identify, collect, record, and report data regarding the driver, vehicle, and environment as it relates to the pre-crash, crash, and post-crash phases of an accident, the course consists of five flexible instructional units. Each lesson provides teaching procedures, behavioral objectives, and suggested learning activities. A related document is available in a previous issue as ED 069 848. (AG)

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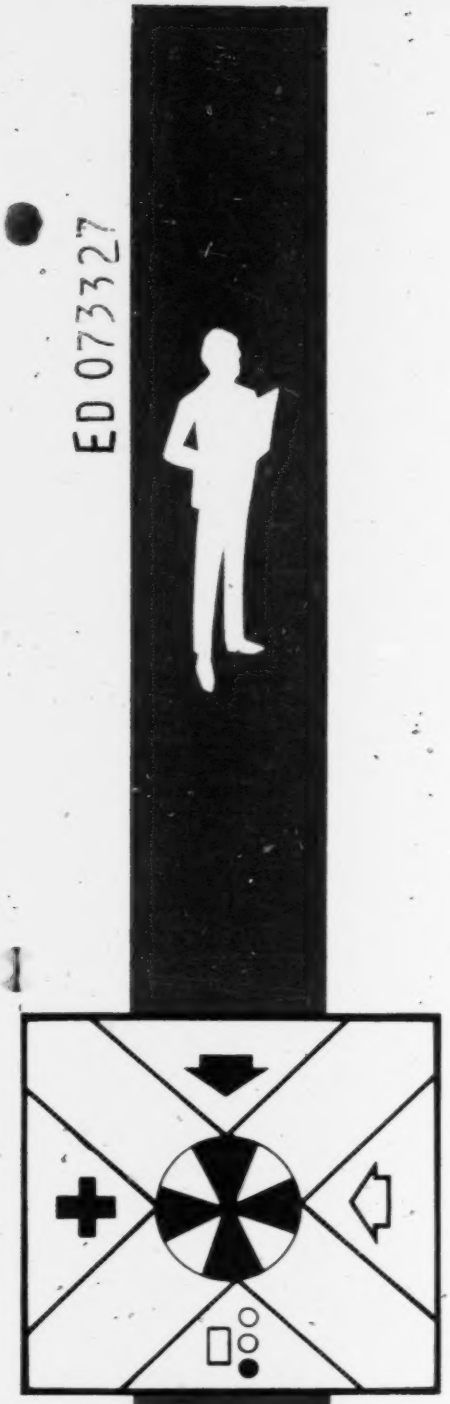

HIGHWAY TRAFFIC ACCIDENT INVESTIGATION AND REPORTING:

STUDENT STUDY GUIDE

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December 1972

Prepared for:

U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
WASHINGTON, D.C. 20590

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U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
WASHINGTON, D.C.

FOREWORD

Transportation technology demands information. Most critical in-highway traffic are the data and facts required to counter accidents. The Center for Vocational and Technical Education, through representation on the Traffic Education and Training Committee of the National Safety Council (NSC), noted the inclusion of accident investigation in the NSC's monograph *Highway Safety Manpower and Training* (18). Accident investigation was likewise noted in *The Role of the Community Colleges in Developing Traffic Specialists and Technicians* (3), a publication of the American Association of Community and Junior Colleges.

The Center conducted a nationwide inventory of sub-baccalaureate-level programs and training materials related to a variety of highway traffic safety occupations. Among priority needs was training in accident investigation and reporting (5).

The National Highway Traffic Safety Administration (NHTSA) in the U.S. Department of Transportation administers nationally a state and community program referred to as Standard No. 18, "Accident Investigation and Reporting." It was in connection with this program that The Center for Vocational and Technical Education was contracted to plan and conduct an in-service instructor training course (6).

Resource materials on accident investigation techniques from a great variety of sources were evaluated as to suitability for a basic course, for intermediate courses, or for an advance course.

The Basic Course: Instructor's Lesson Plans and the *Student Study Guide* are basic-level accident investigation guides referred to and described in the *Highway Traffic Accident Investigation and Reporting: Course Guide* (17), a manual for administrators and planners. They were developed in conjunction with the national Accident Investigation Instructor Training Institute.

Robert E. Taylor
Director
The Center for Vocational
and Technical Education

ACKNOWLEDGEMENTS

The project, "Accident Investigation Instructor Training Institute," was directed by Ronald Daugherty, assistant director of Field Services and Special Projects, The Center for Vocational and Technical Education. Project associates were Anne C. Hayes and Sandra R. Orletsky, graduate research associates. Kenneth Spooner, research coordinator, Vocational Education Department, University of Northern Colorado, served as evaluation consultant to analyze the evaluation of the project.* Pauline Frey served as typist for the project.

The project staff was assisted by several individuals in the development of the accident investigation curriculum package, either by planning or through workshop participation. Appreciation is hereby extended to the following persons: Aaron Adams of NHTSA, who served as contract technical manager; regional workshop consultants were Bernard T. Fagan, associate professor of trade and industrial education, University of Kentucky, Carroll Hyder, assistant professor, Department of Industrial Education, East Tennessee State University, and Ivan Valentine, professor of vocational research, Colorado State University; Richard Fredericks and John Keryeski from NHTSA, who contributed to the technical review; and Sgt. D. G. Slemmer of the Ohio State Highway Patrol Academy, who contributed to the curriculum package and the final technical editing.

* Information about this project can be found in Daugherty, Ronald D.; Hayes, Anne C.; and Orletsky, Sandra R. *Accident Investigation Technician Instructor Training Institute—Final Report.* Washington, D.C.: National Highway Traffic Administration, 1972, available from the National Technical Information Service.

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HIGHWAY TRAFFIC ACCIDENT INVESTIGATION AND REPORTING: STUDENT STUDY GUIDE

ACCIDENT INVESTIGATION

Function. The growing need for accident investigation technicians in the United States has been established by various federal, state, and local government and law enforcement agencies. The manpower estimates for accident investigation technicians by 1977 are for 12,000 full- or part-time persons employed by state or local agencies (*Highway Safety Occupational Program Development Guide* by Daugherty, Brooks, and Hyder, July 1971).

In recognizing the need for a coordinated highway safety effort, the Highway Safety Program Standard No. 18, "Accident Investigation and Reporting," has been developed by the U.S. Department of Transportation (Appendix). The new standard calls for all states to develop uniform comprehensive systems for the collection of traffic accident data. The training of basic-level accident investigation technicians to identify, collect, record, and report the cause of accidents is an essential phase of the overall highway safety program.

The new Standard No. 18 made it necessary to locate substantive resource materials on accident investigation and reporting at the basic level. The principal sources tapped in the search for these materials were unpublished as well as published studies conducted under auspices of the National Highway Traffic Safety Administration. These studies consist of (1) a task analysis for accident investigation technicians conducted for the National Highway Traffic Safety Administration by Battelle Memorial Institute, Columbus, Ohio, and (2) the training course materials developed by the Cornell Aeronautical Laboratory for training multidisciplinary teams of accident investigators. Since only a limited number of resources were located on the topic of accident investigation, those who authored the original lesson plans relied heavily upon materials from which they received their training.

Other principal sources utilized in developing the curriculum model were: the investigation and reporting procedures for the extensive files of incoming reports housed in the NHTSA, an analysis of the performance skills required, and course materials used in the training of the national research network of "multidisciplinary go-team" investigators. Complete references are to be found in the *Accident Investigation Technician Instructor Training Institute-Final Report*, available from the National Technical Information Service (6).

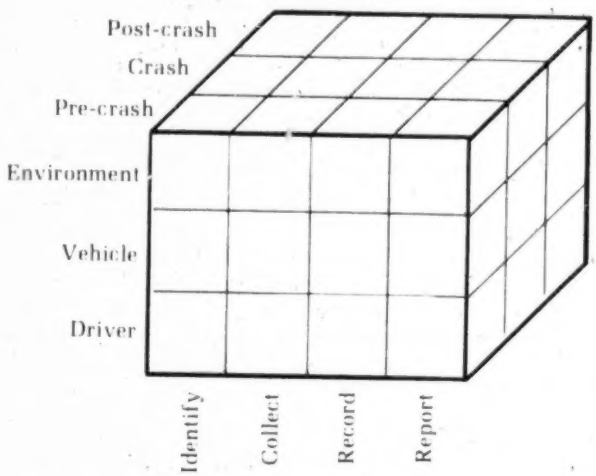
Figure 1 illustrates the adapted NHTSA model developed to train a basic-level accident investigation technician. The following is a description of the model.

There are:

1. Three phases of accident investigation, consisting of pre-crash, crash, and post-crash
2. Three components of accident investigation: environment, vehicle, and driver
3. Four functions of the basic-level accident investigation technican, involving the skills necessary to identify, collect, record, and report (15).

Figure 1

Matrix for Highway Traffic Accident Investigation and Reporting Curriculum



Information gained about the pre-crash phase contributes to understanding accident avoidance, that gained about the crash phase contributes to injury prevention, and the knowledge learned about the post-crash phase helps reduce the severity of accidents.

Skillfull identification provides quick and complete surveys and analysis of complex situations. Selected items and conditions are accurately designated and defined. Skillfull collection requires priority decisions and results in the quantification and qualification of accident information times, frequencies, amounts, and distances. Skillful recording provides input materials to allow the preparation and presentation of summaries of investigations of accidents. Field notes, sketches, and photographs are required documentation. Skillful reporting provides the end product or service. Oral briefings or written documentation are invaluable to understanding and allow continuing efforts for reduction of fatalities, injuries, and property damage.

Current literature in the field of accident investigation and reporting describes practices

from the crudest to highly scientific computer modeling. This, along with the logical roles of the several agencies in both the private and public sectors, was considered in the determination of scopes and content of a basic-level course in accident investigation and reporting. A major source of information used in the development of the content of the lesson plans was J. Stannard Baker's *Traffic Accident Investigation Manual for Police.*

Manpower. It proved relatively easy to identify numbers of scientists and researchers, engineers, educators, and other authorities in the field. Labor force inventories and projections dealing with nonprofessional, i.e., technical manpower, applied man-year equivalencies or levels of effort rather than head-count data. Accident investigation and reporting was found at present to be a function within a broader function such as law enforcement. Police officers, among other duties, do accident investigation. A number of jobs or positions such as traffic engineering technicians and emergency vehicle dispatchers require, among other skills, a high degree of one or more accident investigation skills.

An additional type of job classification may be observed in public service or governmental agencies. It includes such positions as intern, assistant, or aide. Qualifications are comparable to the police patrolman, the emergency medical technician, the driver license examiner, traffic records, programmer, and others. It is for such in-service state and local agency personnel that training in skills of basic-level accident investigation and reporting will prove most beneficial.

Potential employers for accident investigation technicians can be found in the four general areas: public service, commercial, manufacturing, and government. A partial listing of potential employers in each area might be as follows:

Public Service
Insurance boards
State police
Local police
City planners
Highway departments
Hospitals
Ambulance companies

Commercial
Legal firms
Detective agencies
Hospitals and clinics
Medical associations
Medical schools
Consulting companies
Insurance companies
Casualty companies
Adjustment agencies
Automotive engineering firms
Fleet operations
Ambulance companies
Construction firms
Architectural firms
Consumer research operations
Publishers
Freight carriers

Manufacturing
Automotive manufacturers
Parts manufacturers
Tire manufacturers
Automotive suppliers (glass, chemicals, systems, etc.)

Government
City planners
County road commissions
Consumer research agencies
Government research
Traffic institutes
Highway research boards
Safety council
Medical schools
Government committees
Federal highway agencies
Federal carriers

Course Content. The accident investigation course is organized to provide instruction in skills associated with facts and information, identification, collecting, recording, and reporting. (See Figure 2. The course outline corresponds to the curriculum model previously described in Figure 1.)

The course consists of five lesson units involving a flexible number of training hours. The hours requirement was designed to be unspecified in order to provide the maximum flexibility for the curriculum. The first unit serves as an overview of the highway transportation system, emphasizing the purposes, responsibilities, and objectives of the accident investigation technician as well as a general introduction to planning the investigation.

The second unit stresses the identification function of investigation as it relates to the driver, vehicle, and environment in examing for pre-crash, crash, and post-crash contributory conditions and causes as well as determining definitions and classifications.

The third unit emphasizes the learning of the skills an investigator must have in order to collect data thorugh interviews, measurements, photography, and determining speed estimates.

The fourth unit introduces the methods of recording accident data gathered through photography, field sketches, and interviews.

The fifth unit emphasizes concepts involved in accident reconstruction, reporting the investigation of an accident, and preparing and presenting the accident report.

Purpose of the Course. The curriculum package has two major objectives: (1) to develop the skills essential for an accident investigation technician to possess for a basic level position and (2) to train basic-level accident investigation technicians to identify, collect, record, and report data regarding the driver, vehicle, and environment as it relates to the pre-crash, crash, and post-crash phases of an accident.

The technical functions are performed most effectively when an understanding and appreciation of related theories and knowledge are possessed.

The course is designed to emphasize the skills of investigation while avoiding direct involvement with actual accident situations, vehicles, or drivers. It is not dependent upon legal authority nor requirements to present evidence in court. On the other hand, provision is made through a Job Activity Sheet for trainees who, in the normal course of performing their work, have occasion to apply skills in an actual accident situation. The course assumes the trainee possesses normal

abilities and understandings of the psycho-physical nature of humans and common performance characteristics of vehicles, and that he is familiar with the system of urban and rural streets and highways.

The demonstration nature of the training precludes extensive treatment of theoretical materials or any but routine investigative functions. Examples are alcohol blood-equivalent testing and speed calculation by test skids.

Figure 2
COURSE CONTENT OUTLINE FOR HIGHWAY TRAFFIC ACCIDENT INVESTIGATION AND REPORTING: BASIC COURSE

Lesson	
	Introduction
1	Highway transportation system
2	Purposes, responsibilities, and objectives of the accident investigator
3	Plan the investigation
	Identify
4	Definitions and classifications
	The driver
5	Identify the driver
6	Identify pre-crash conditions of the driver, with reference to alcohol/drugs
7	Identify for pre-crash and post-crash conditions of the driver, with reference to emotions, fatigue, and physical illness
8	Identify behaviors as driver personality and attitude
9	Identify natural abilities of the driver
10	Identify learned capabilities of the driver
11	Identify persons other than the driver as potential sources of information
	The vehicle
12	Identify vehicle types and components
13	Identify pre-crash, crash, and post-crash vehicle damage and defects
14	Identify for sources of injury to occupants and/or pedestrians
	The environment
15	Identify and determine environmental attributes
16	Identify pre-crash marks on the roadway, shoulder, and environment
17	Identify position and angle of infliction
18	Identify debris
19	Identify vehicle parts with crash marks on the roadway and surrounding environment
20	Identify area of impact from marks on the roadway
21	Identify post-crash roadway marks in relation to the accidents
	Collect
22	Pre-crash and post-crash actions and reactions
23	Interview
24	Collect and preserve physical evidence
25	Make relocation measurements
26	Photograph
27	Make speed estimates
	Record
28	Introduction to methods of recording data
29	How to record via photography
30	How to record via field sketches
31	How to record via notes from interviews
	Report
32	Reconstruction principles and causation analysis
33	Report the investigation of an accident
34	Prepare and present the accident report
35	*Simulated (mock) Traffic Investigation*

PURPOSE OF THE STUDENT STUDY GUIDE

The Student Study Guide contains related materials for a student undertaking training in an accident investigation program. The guide has been developed to be used in conjunction with the Instructor's Lesson Plan Guide to enable the student to more readily acquire the knowledge and skills essential to perform the duties of an accident investigation technician.

The first section of the guide provides an explanation for the development of the accident investigation curriculum package and the importance of the highway safety programs.

An overview of the course for training accident investigation technicians is provided to enable the student to understand the total program.

Included is a brief description of each lesson, the lesson objectives, suggested activities for the student, and suggested references and reading selections. These selections have been taken from the *Traffic Accident Investigator's Manual for Police* by J. Stannard Baker.

The main emphasis of this guide consists of a Job Activity Sheet that has been developed so that an individual student can measure and record his level of performance in a variety of accident investigation skills. In using the suggested activities it is recommended that the instructor determine an acceptable level of performance to be attained by the student.

It is hoped that through the use of the Job Activity Sheets the individual student can proceed at his own pace and demonstrate attainment of a desired level of performance. Each individual can chart his own progress, thereby incorporating some aspects of an individualized course of instruction.

In addition to the readings, a bibliography has been cited to provide the student with reference materials to enhance the learning process.

To aid in developing effective study habits, the student has been provided with the steps in the SQ3R method—survey, question, read, recite, and review.

The student can conduct his or her evaluation of the instructor and the course by utilizing the instrument provided for this purpose. This instrument, Student Opinion of Teaching and Course, is found in the Appendix.

HOW TO USE THE JOB ACTIVITY SHEET

The Job Activity Sheet is to be used to measure and record the students' level of performance of accident investigation skills.

Each lesson except those noted below have an activity sheet provided on the following pages:

Lesson 7—Identify for pre-crash and post-crash condition of the driver with reference to emotions fatigue and physical illness.

Lesson 11—Identify persons other than the driver as potential sources of information.

Lesson 15—Identify and determine environmental attributes.

Lesson 28—Introduction to methods of recording data.

Lesson 35—Simulated (mock) traffic investigation.

These activities should be performed by each individual student outside the actual classroom situation.

The procedure that is suggested in using the Job Activity Sheets is as follows:

1. Perform the assigned activity listed under each lesson title as it is suggested in column one.
2. Keep a record of the performance of the activity, collect all necessary evidence to support the documentation of the completed activity, and complete the description of the activity as performed in column two.
3. List the date in column three that the assigned activity is completed.
4. The instructor should enter any comments and evaluation remarks of the student's performance in the fourth column.

These Activity Sheets can be submitted to the instructor as they are completed for each lesson topic or they can be submitted at the end of the course as a record of the student's total performance.

Space has been provided under each assigned activity for the instructor to make any additional assignments that will enhance student performance as an accident investigation technician.

Highway Traffic Accident Investigation and Reporting
Basic Course Description

Introduction

Lesson 1 HIGHWAY TRANSPORTATION SYSTEM

Discuss the highway transportation system through a study of the major problems and justify the need for specific accident investigation information.

Objectives:

1. Describe the highway transportation system.
2. List the major problems involved with highway transportation.
3. Explain the four contributing factors to traffic accidents and the elements within each factor.
4. Explain the relationship of the investigation task to the four approaches to accident control or prevention.

Application (suggested classroom activities):

1. View slides which depict various aspects of the highway transportation system, its problems, and accident scenes with appropriate narration to explain the scene.
   a. Students identify and discuss what is observed in each slide with reference to elements of system, problems, accident factors, and possible corrective action where applicable.
   b. Students discuss observations with particular emphasis on using information presented by the instructor.
2. Refer to Job Activity Sheet, Assigned Activities, Lesson 1.

Lesson 2 PURPOSES, RESPONSIBILITIES, AND OBJECTIVES OF THE ACCIDENT INVESTIGATOR

Explain the purpose, responsibilities, and objectives of accident investigation and the role of the investigator.

Objectives:

1. Explain the purpose of an accident investigator at the scene of an accident to the instructor's satisfaction.
2. List the basic responsibilities of the accident investigator as outlined in the lesson.
3. Explain the objectives of an accident investigator with the use of the four "E" concept.

Application (suggested classroom activities):

1. Students summarize the purpose, responsibilities, and objectives of the accident investigator.

a. What does the P of PRO represent?
b. Why are you at the accident scene?
c. What does the R of PRO represent?
d. What are you going to do at the accident scene?
e. What does the O of PRO represent?
f. Now that you are at the accident scene, what are you going to do and why?
g. What are the (4) four "E"(s) relating to accident investigation?

2. Refer to Job Activity Sheet, Assigned Activities, Lesson 2.

Suggested Reading.

1. Baker, J. Stannard. *Traffic Accident Investigator's Manual for Police*. Evanston, Illinois: Northwestern University, 1971, pp. 53-66.

Lesson 3 PLAN THE INVESTIGATION

Explain the need, value, and purpose of planning to include many facts of accident investigation in order of priority logic and adaptability.

Objectives:

1. Explain briefly the value and purpose of planning the accident investigation task.
2. List and describe the six phases of planning for accident investigation.

Application (suggested classroom activities):

1. Write a paragraph on "Why Plan for Investigation?"
2. Given a simulated (mock) situation, plan the procedure for investigating an accident. Prepare this in writing.
3. Refer to Job Activity Sheet, Assigned Activities, Lesson 3.

Suggested Reading:

1. Baker, J. Stannard. *Traffic Accident Investigator's Manual for Police*. Evanston, Illinois: Northwestern University, 1971, pp. 81-86; 89-98.

IDENTIFY

Lesson 4 DEFINITIONS AND CLASSIFICATIONS

Become familiar with the legal and investigative terms in the "Manual of Classification of Motor Vehicle Accidents" and be able to make application as necessary.

Objectives:

1. Demonstrate the proper usage of legal and investigative terminology to accurately describe factors and events in motor vehicle accidents.
2. Demonstrate familiarization with the classification of motor vehicle accidents.

Application (suggested classroom activities):

1. Using a series of prepared accident diagrams and descriptions, classify them according to the accepted standard using correct terminology.
2. Refer to Job Activity Sheet, Assigned Activities, Lesson 4.

Suggested Reading:

1. Traffic Accident Data Project. *Manual on Classification of Motor Vehicle Traffic Accidents*. Chicago, Illinois: The National Safety Council, 1970.

The Driver

Lesson 5 IDENTIFY THE DRIVER

Identify drivers of vehicles involved in accidents and recognize clues as to the identity of drivers and general methods of gaining pertinent information from other persons present at crash scenes.

Objectives:

1. Identify all relevant terms with corresponding definitions as they apply to the identification of the driver.
2. Identify driver's responsibility in relation to civil and criminal obligations.
3. Analyze and differentiate between the DO'S and DON'TS of identifying and alerting involved drivers.
4. Itemize reasons why time is of the essence in identifying the drivers.
5. Orally specify reasons why a driver(s) will many times flee from the accident scene.

Application (suggested classroom activities):

1. Working in pairs or small groups, write a simulated (mock) situation to reflect the following:
   a. The do's and don'ts of locating and identifying accident scene drivers.
   b. Situations showing five reasons why time is important in identifying drivers.
   c. Situations depicting reasons why a driver will flee from the accident scene.
2. Role-play the simulated (mock) situations before the class using assigned roles to play and discuss the prominent points in the lesson unit.
3. Refer to Job Activity Sheet, Assigned Activities, Lesson 5.

Lesson 6 IDENTIFY PRE-CRASH CONDITIONS OF THE DRIVER WITH REFERENCE TO ALCOHOL/DRUGS FOR SOBRIETY

Discuss an abbreviated history of the use of alcohol and present methods of recognizing, testing, and documenting alcoholic influence on drivers and the extent to which it has contributed to the accident.

Objectives:

1. Identify symptoms or characteristics of the alcohol and/or drug influenced person.
2. Demonstrate the performance tests as shown on the alcohol or drug report form to determine physical abilities.

Application (suggested classroom activities):

1. Working in pairs, perform a series of coordination tests to determine influence of alcohol/drugs in the same manner as in the actual field situations. As the tests are conducted describe what specific things to look for that will indicate deterioration of ability.

2. Administer a physical coordination test on an actual drinking subject and describe how to do the test and what things to look for.
3. Observe use of a portable breath testing device demonstration that maintains a constant level of blood alcohol to illustrate the amount of deterioration with the blood alcohol content.
   a. Conduct the drinking subjects in the performance tests as shown on the alcoholic influence report form.
   b. Complete the alcoholic influence report form as the tests are being conducted.
   c. After the testing is complete, evaluate what was seen and done in the classroom and equate these things to the actual driving situation.
4. Note: CAUTIONS
   a. Keep blood alcohol levels below .10%.
   b. Once the drinking subjects have started be careful to hold them in careful control.
5. Refer to Job Activity Sheet, Assigned Activities, Lesson 6.

Suggested Reading:

1. Baker, J. Stannard. *Traffic Accident Investigator's Manual for Police*. Evanston, Illinois: Northwestern University, 1971, pp. 212-215.

Lesson 7 IDENTIFY FOR PRE-CRASH AND POST-CRASH CONDITIONS OF THE DRIVER WITH REFERENCE TO EMOTION, FATIGUE, AND PHYSICAL ILLNESS

Become aware of factors of emotion, fatigue, and physical illness which contribute to highway crashes.

Objectives:

1. Identify evidence at accident scene which indicate causation from emotion, fatigue, and physical illness.
2. Identify driver condition causing the driver to perform incorrectly.

Application (suggested classroom activities):

1. The questions suggested in Application 2 should be answered in reference to these or other fact situations (each group should select one):
   a. A young lady is found by motorists along the road at night confused and shaken up. You find her car in the middle of a large field. Physical evidence shows the vehicle left the roadway, crashed through the fence, and over an irrigation ditch. There is no sign of evasive action. The driver claims no knowledge of what happened.
   b. It is a bright sunny day with heavy traffic. Two vehicles driven by two young men lock bumpers (right rear to left front) on a four-lane road. They both lose control and leave the roadway. One driver says he misjudged his passing clearance.
   c. Around 6 a.m. in July, a vehicle collides with the rear of another as they both were traveling east on a long stretch of interstate highway. Neither driver is hurt. There is no evidence of evasive action. The driver of the rear vehicle states that he was in the act of fastening his seat belt when the accident occurred.

2. Work in small groups and list probable answers to the following questions using a role-play situation or fact situations.
   a. What was the driver's condition? (emotion, fatigue, or physical illness)
   b. Explain how you think it contributed to the cause of the accident.
   c. List some questions you would ask or factors you may want to consider to verify your suspicions.
   d. How might you, as the investigator, utilize what information you may have obtained?

Suggested Reading:

1. Baker, J. Stannard. *Traffic Accident Investigator's Manual for Police*. Evanston, Illinois: Northwestern University, 1971, pp. 147, 208, 216-218.

Lesson 8 IDENTIFY BEHAVIORS AS DRIVER PERSONALITY AND ATTITUDE

Discuss the personality and attitude of the driver in relation to the causation of a traffic crash and the administration of tests to determine the effect of personality and attitude on the cause of a traffic crash.

Objectives:

1. Identify attitudes as they relate to the driver's behavior.
2. Identify the various factors which affect attitudes as they relate to driver behavior.
3. Relate how the driver's attitude can affect the investigator's behavior.

Application (suggested classroom activities):

1. Using the technique of role playing, work in pairs on one of the following situations and act out showing the driver's attitude and how it affects his performance as the driver. Also stress how the driver's attitude may affect the investigator's performance.
   a. Some suggested situations are:
      (1) Witnesses tell the investigator that about half a minute before the accident the two cars were lined up alongside each other and the drivers were talking.
      (2) A vehicle containing two teenaged couples has slid off a curve apparently at a high rate of speed. How would you assess the part that the driver's attitude may have had?
      (3) A vehicle driven by a "hippie" type has struck a vehicle driven by a middle-aged stock broker. What are the attitudinal possibilities of each party and of the investigator?
      (4) A vehicle driven by a young man crosses the center line and collides with another vehicle. Just before the impact, a vehicle driven by a beautiful young woman was on his right.
2. Refer to Job Activity Sheet, Assigned Activities, Lesson 8.

Suggested Reading:

1. Baker, J. Stannard. *Traffic Accident Investigator's Manual for Police*. Evanston, Illinois: Northwestern University, 1971, pp. 206-208.

Lesson 9 IDENTIFY NATURAL ABILITIES OF THE DRIVER

Discuss the identification and testing of driver's natural abilities to determine the extent of their contributions to causes of traffic accidents.

Objectives:

1. Identify the conditional characteristics of an individual's natural abilities, such as vision, hearing, reaction, physical control, and obvious mental and emotional characteristics as they relate to accident investigation.
2. Perform roadside tests to determine natural abilities as potential accident causes.
3. Identify driver distractions and reactions as possible accident causes.

Application (suggested classroom activities):

1. Demonstrate how roadside tests are performed to determine natural abilities of the driver. Practice the techniques derived from demonstrations for skill development. By team pairing, perform each of the roadside tests repeatedly until the instructor determines that the procedure is learned. Roadside test should include:
   a. Testing reaction time
   b. Vision
      (1) Acuity
      (2) Night blindness
      (3) Glare blindness
      (4) Depth perception
      (5) Color blindness
   c. Hearing
   d. Mental and nervous conditions
   e. Physical deficiencies and disabilities
2. Refer to Job Activity Sheet, Assigned Activities, Lesson 9.

Suggested Reading:

1. Baker, J. Stannard. *Traffic Accident Investigator's Manual for Police*. Evanston, Illinois: Northwestern University, 1971, pp. 197-203.

Lesson 10 IDENTIFY LEARNED CAPABILITIES OF THE DRIVER

Discuss the learned capabilities of the driver including driving skills, vehicle maintenance, highway signs, and indicators of the lack of driving skills as they relate to accident crashes.

Objectives:

1. List the general capabilities necessary for driving a motor vehicle.
2. Identify improperly performed driver skills that may contribute to accident causes.

Application (suggested classroom activities):

1. Using driver education simulators (source: local high school), have students react to shapes of highway signs and perform instructor-specified driving skills.

2. Using pairs of students, have one student put the other through predetermined driving simulation exercises for the purpose of determining driving ability.
3. Refer to Job Activity Sheet, Assigned Activities, Lesson 10.

Suggested Reading:

1. Baker, J. Stannard. *Traffic Accident Investigator's Manual for Police*. Evanston, Illinois: Northwestern University, 1971, pp. 203-211.

Lesson 11 IDENTIFY PERSONS OTHER THAN THE DRIVER AS POTENTIAL SOURCES OF INFORMATION

Provide procedures and techniques of identifying persons other than the driver as potential sources of information at a traffic accident.

Objectives:

1. Identify persons other than the driver in an accident investigation scene.

Application (suggested classroom activities):

1. Using several simulated accident situations with role playing as a method of involvement, each student should play either the part of the accident investigator or witnesses and passengers. The specific objectives for the investigator should be properly locate and identify all persons other than the driver at an accident scene.

Suggested Readings:

1. Baker, J. Stannard. *Traffic Accident Investigator's Manual for Police*. Evanston, Illinois: Northwestern University, 1971, pp. 155-156; 610.

The Vehicles

Lesson 12 IDENTIFY VEHICLE TYPES AND COMPONENTS

Identify, locate, and describe various vehicle types and their major component parts.

Objectives:

1. Identify the types of vehicles by their makes and models.
2. Identify the major vehicle components, their location, and primary function.

Application (suggested classroom activities):

1. View slides, pictures, transparencies, and identify the various vehicles, makes, and models.
2. View appropriate visual aids and identify, describe, and explain the major components of vehicles.
3. Refer to Job Activity Sheet, Assigned Activities, Lesson 12.

Suggested Reading:

1. Collins, James C., and Morris, Joe L. *Highway Collision Analysis*. Springfield, Illinois: Charles C. Thomas, 1967, pp. 3-36.

Lesson 13 IDENTIFY PRE-CRASH, CRASH, AND POST-CRASH VEHICLE DAMAGE AND DEFECTS

Identify contact, induced, and multiple impact damage to vehicles found at an accident scene and reconstruct the "chain of events" of an accident.

Objectives:

1. Describe contact, induced, and overlap damage in an accident situation.
2. Identify damage to the vehicles and defects to the vehicles found at the accident scene which had been either present or caused previous to this accident yet was not a causation factor in it.
3. Identify pre-crash, crash, and post-crash damage and defects related to the accident.

Application (suggested classroom activities):

1. View transparencies and identify contact, induced, and overlapped damage. Discuss what the damage indicates in relation to the accident.
2. Visit a wrecking yard, body shop, or parking lot and using a supplied case file for the predetermined vehicle, list in writing all contact induced and overlap damage which is found on the vehicle.
3. In addition to the visit to a junk yard for an examination of various vehicles for pre-crash damage and defects, the following activities are suggested:
   a. View a simulated or actually wrecked automobile and identify various types of noncontributory damage.
   b. Given a list of auto parts, identify the various types of damage to look for.
   c. Given a part from a recently wrecked auto, distinguish between recent and old damage.
4. Refer to Job Activity Sheet, Assigned Activities, Lesson 13.

Suggested Reading:

1. Baker, J. Stannard. *Traffic Accident Investigator's Manual for Police*. Evanston, Illinois: Northwestern University, 1971, pp. 283-312.

Lesson 14 IDENTIFY THE VEHICLE FOR SOURCE OF INJURY TO OCCUPANTS AND/OR PEDESTRIANS

Examine and identify the causes of death and injuries by physical contact with components of a motor vehicle.

Objectives:

1. Examine the vehicle for the purpose of identifying occupant and pedestrian contact points.
2. Identify on a worksheet all causative factors of injury relating to the vehicle.

Application (suggested classroom activities):

1. Using handouts of exterior and interior worksheets of various types of vehicles discuss possible damage points on the vehicle as they might relate to various vehicle-pedestrian accident situations or occupant injury in other types of motor vehicle accidents.

a. Example:
   (1) Medium-sized adult male struck by passenger car traveling approximately 25 miles per hour. Point of impact is center of front bumper.
   (2) Middle-aged woman involved in head-on collision at 40 miles per hour. She is sitting upright in the right front rider's seat and was not wearing a seat belt.

2. View selected damaged vehicles and prepare interior and exterior vehicle worksheets pinpointing points of damage caused by body contact.
   a. Locations of vehicles to be reviewed:
      (1) Auto salvage yards
      (2) Police impounding lot
      (3) Wrecker storage lot
3. Refer to Job Activity Sheet, Assigned Activities, Lesson 14.

The Environment

Lesson 15 IDENTIFY AND DETERMINE ENVIRONMENTAL ATTRIBUTES

Determine the modifiers and attributes of the roadway and environment as they relate to the accident cause.

Objectives:

1. Determine type, composition of roadway, and markings on the surface of the road.
2. Identify the pertinent attributes of the roadway and environment at an actual or simulated accident site.
3. Identify where to obtain other sources of information about environment, i.e., engineers.

Application (suggested classroom activities):

1. Students will independently complete a "Roadway Description Checklist" and diagram relating to environmental attributes.
2. Under the teacher's supervision, students will critique an accident and record observations and information, giving their views as to what factors in the roadway environment might have contributed to the accident.

Suggested Reading:

1. Baker, J. Stannard. *Traffic Accident Investigator's Manual for Police.* Evanston, Illinois: Northwestern University, 1971, pp. 37-43; 161-184.

Lesson 16 IDENTIFY PRE-CRASH MARKS ON THE ROADWAY, SHOULDER, AND ENVIRONMENT

Recognize the value, validity, and applicability of pre-crash marks on the roadway such as skidmarks, scuffmarks, etc., in order to determine the behavior of the driver and actions of the vehicle prior to impact.

Objectives:

1. Demonstrate familiarity with terminology regarding roadway/highway descriptions and types of marks.
2. Demonstrate his ability to identify valid pre-crash marks on the roadway, shoulder, and environment.
3. Detect and interpret pre-crash marks on the roadway such as skidmarks, scuffmarks, shoulder marks, etc., in order to determine the behavior of the driver and vehicle prior to impact.

Application (suggested classroom activities):

1. Students will proceed independently with more teacher prepared accident diagrams. Teacher circulates in class and asks questions of individuals regarding procedures of identifying pre-crash marks on the roadway, shoulder, and environment.
2. Using instructor-prepared skidmarks and scuffmarks on parking lot, etc., students will perform on-site and carry out proper investigation procedures singly or in pairs. The student will apply his classroom knowledge on-site by doing the following:
   a. Identify pre-crash marks on scene
      (1) Show gray area on skidmarks and explain.
      (2) Show difference between tire going sideways and one skidding.
      (3) Record shoulder skids separately from paving asphalt skidmarks.
      (4) Chalk start and ending of marks.
      (5) Show difference between tire print and skid.
3. Refer to Job Activity Sheet, Assigned Activities, Lesson 16.

Suggested Reading:

1. Baker, J. Stannard. *Traffic Accident Investigator's Manual for Police*. Evanston, Illinois: Northwestern University, 1971, pp. 240-282.

Lesson 17 IDENTIFY POSITION AND ANGLE OF INFLICTION

Identify the position and angles of infliction and interpret their relationship to the accident.

Objectives:

1. Determine and point out the position and angle of infliction.
2. Relate orally how he formed his conclusion.

Application (suggested classroom activities):

1. The instructor should move the class to a wrecking yard. Have students point out and tell the angle of infliction on a variety of wrecked vehicles, and explain to instructor his reason for his opinion. This should be done for each vehicle in writing and then each student orally tell his opinion. Corrections should be made at this time. Have pictures of these vehicles. Return to class and critique the problems.
2. Refer to Job Activity Sheet, Assigned Activities, Lesson 17.

Suggested Reading:

1. Baker, J. Stannard. *Traffic Accident Investigator's Manual for Police.* Evanston, Illinois: Northwestern University, 1971, pp. 546-558.

Lesson 18 IDENTIFY DEBRIS

Identify and evaluate the seven types and nine varieties of debris that can be found at crash scenes; and through investigation determine what was involved and where the collision occurred.

Objectives:

1. Differentiate on a worksheet the types of debris at an accident scene.
2. Identify and evaluate certain varieties of debris to determine:
   a. Significance of the debris
   b. Area of impact (area of engagement)
   c. Direction and path of traffic units
   d. Final positions of traffic units involved
   e. Vehicle performance

Application (suggested classroom activities):

1. Examine photographs of on-site accident scenes and identify the different types of debris. Indicate initial contact, maximum engagement, path and direction of travel, and final position.
2. A contrived on-site accident scene can be set up by members of the class. Set up the scene in a suitable area, such as a parking lot.
   a. Position two cars in final positions.
   b. Pour water in front of each vehicle to represent runoff.
   c. Drip oil to indicate path of travel.
   d. Deposit dirt to represent maximum engagement.
   e. Spatter oil forcibly on pavement to represent initial contact.
   f. Scatter pieces of chrome and dirt to represent direction of travel.
   g. Use ketchup to indicate blood for indication of passenger ejection.
   h. Conduct the mock investigation and record the measurements of individual worksheets.
3. Refer to Job Activity Sheet, Assigned Activities, Lesson 18.

Suggested Reading:

1. Baker, J. Stannard. *Traffic Accident Investigator's Manual for Police.* Evanston, Illinois, 1971, pp. 223-240.

Lesson 19 IDENTIFYING VEHICLE PARTS WITH CRASH MARKS ON THE ROAD AND SURROUNDING ENVIRONMENT

Identify and locate crash damage on the road and surrounding environment and relate them to vehicle parts and accident causation.

Objectives:

1. Locate and identify crash damage on highways and environment under supervision on field trip noting any damage that contains particles of environment.
2. Shade in physical evidence damage on work handout sheets and label what in the environment caused damage to the vehicle.

Application (suggested classroom activities):

1. View slides illustrating damage to vehicles and environment and identify what caused the damage.
2. Visit a junk yard or any garage to locate and identify damage on vehicles. Individual reports can be recorded for review by the instructor and/or other students.
3. Refer to Job Activity Sheet, Assigned Activities, Lesson 19.

Suggested Reading:

1. Baker, J. Stannard. *Traffic Accident Investigator's Manual for Police*. Evanston, Illinois: Northwestern University, 1971, pp. 231-282.

Lesson 20 IDENTIFY AREA OF IMPACT FROM MARKS ON THE ROADWAY

Determine the area of impact of the accident from evidence available from roadway marks.

Objectives:

1. Describe the reasons for establishing the area of impact.
2. Establish the area of impact using physical evidence found at an accident scene.

Application (suggested classroom activities):

1. Using handout with diagrams and descriptive sentences, have students identify the types of accident or classification such as:
   a. on roadway—other noncollision
   b. off roadway—collision involving pedestrians
   c. on roadway—collision involving motor vehicle
   d. off roadway—collision involving parked motor vehicle
   e. off roadway—collision involving fixed object
2. At a simulated accident situation, the students will identify the area of impact through analysis of the physical evidence available. Simulated accident situations could be prepared by the instructor or by teams of students for analysis by other class members.
3. Refer to Job Activity Sheet, Assigned Activities, Lesson 20.

Lesson 21 IDENTIFY POST-CRASH ROADWAY MARKS IN RELATION TO THE ACCIDENT

Detect and evaluate post-crash roadway marks in determining the path of each vehicle from initial impact to final position.

Objective:

1. Identify post-crash roadway marks which indicate the post-collision behavior of vehicles.

Application (suggested classroom activities):

1. Observe a contrived collision scene utilizing vehicles with compatible damage, showing skidmarks, vehicle parts, and underbody debris. Practice conducting an entire on-site investigation and submit reports. Identify and submit reports. Identify significant marks and explain significance.
   a. Operation or steps on scene:
      (1) Identify post-crash marks on the road and off the road.
      (2) Outline significance of each mark
         (a) What caused the mark?
         (b) Relationship to movement of vehicle?
         (c) At what point after the collision did the mark occur?
      (3) Evaluate damages in relation to post-crash data.
2. Refer to Job Activity Sheet, Assigned Activities, Lesson 21.

Suggested Reading:

1. Baker, J. Stannard. *Traffic Accident Investigator's Manual for Police*. Evanston, Illinois: Northwestern University, 1971, pp. 231-282.

COLLECT

Lesson 22 PRE-CRASH AND POST-CRASH ACTIONS AND REACTIONS

Reconstruct the chain of events leading up to and including the final position of the involved parties by studying the efforts made by the driver, coupled with the vehicles and highway conditions.

Objective:

1. Reconstruct the events occurring from the point of possible perception of the hazard to the point of the final position of the parties involved by questioning the involved parties and by viewing the physical evidence present at the scene.

Application (suggested classroom activities):

1. Using a simulated accident scene or a scale diagram:
   a. Play the role of
      (1) Involved units
      (2) Accident site investigator

b. Relate to the class the involved parties' actions and reactions by a series of questions and explanations.
c. Explain the events of an accident by pointing out and explaining each step of the accident from perception through final position.

2. Refer to Job Activity Sheet, Assigned Activities, Lesson 22.

Suggested Reading:

1. Baker, J. Stannard. *Traffic Accident Investigator's Manual for Police*. Evanston, Illinois: Northwestern University, 1971, pp. 10-18.

Lesson 23 INTERVIEW

Develop ability to extract pertinent information from persons involved in the accident by acquiring an understanding of human nature and a knowledge of how to obtain and verify the information given.

Objectives:

1. List in writing the suggested basic qualifications for an interviewer and evaluate these qualifications.
2. List in writing the steps in the process of interviewing the involved party and obtaining the desired information.
3. Identify the essential information to be obtained as it relates to the accident.
4. List factors which influence the involved parties' information regarding the accident.
5. Demonstrate in a simulated (mock) classroom situation his knowledge of the basic interviewing techniques to be applied in the interview situation.

Application (suggested classroom activities):

1. Use handout containing several situations which might present themselves to accident investigators and assume role of investigator and driver and conduct interviews and interrogations, while other students observe and take part in critique. Suggested situations:
   a. Driver uncommunicative. Furnishes minimum information required. Anxious to leave, "See my lawyer."
   b. Driver very mad at other driver and investigator. Says accident not his fault. "Why bother me?"
   c. Driver shocked and dazed but no visible injuries.
   d. Driver very talkative about everything but accident.
2. Using a given accident investigation topic, define the topic, prepare a list of investigative steps to be taken emphasizing the interview portion, and present the mock accident interviewing situation before the class in a role playing manner.
3. Work in cooperation with local authorities and observe an interview session if facilities such as one-way mirror are provided.
4. Refer to Job Activity Sheet, Assigned Activities, Lesson 23.

Suggested Reading:

1. Baker, J. Stannard. *Traffic Accident Investigator's Manual for Police*. Evanston, Illinois: Northwestern University, 1971, pp. 141-160.

Lesson 24 COLLECT AND PRESERVE PHYSICAL EVIDENCE

Demonstrate the proper method of removing, labeling, preserving, and storing significant items of physical evidence from an accident scene.

Objective:

1. Collect, preserve, and store any and all physical evidence related to an accident crash scene.

Application (suggested classroom activities):

1. From an actual accident scene photograph, identify the evidence that should be collected and describe the preservation method to be used.
2. Using a simulated (mock) accident scene, correctly collect, label, and preserve all physical evidence.
3. Refer to Job Activity Sheet, Assigned Activities, Lesson 24.

Suggested Reading:

1. Baker, J. Stannard. *Traffic Accident Investigator's Manual for Police*. Evanston, Illinois: Northwestern University, 1971, pp. 228-230.

Lesson 25 MAKE RELOCATION MEASUREMENTS

Make accurate relocation measurements that will permit the accident investigation technician to reconstruct the actual scene at a later date.

Objectives:

1. Identify if the measurements at an accident are of positions which are temporary or short-lived in nature.
2. Demonstrate two methods of making relocation measurements, including how, from what point, and to where they should be made.

Application (suggested classroom activities):

1. Using a simulated (mock) accident site:
   a. Accident scene will have physical evidence present, vehicles, debris, etc.
   b. Demonstrate to the instructor's satisfaction how to relocate designated objects at the scene.
      (1) Each of the methods shall be used:
      (a) Coordination
      (b) Triangulation
   c. Draw field sketch to be submitted.
2. Refer to Job Activity Sheet, Assigned Activities, Lesson 25.

Suggested Reading:

1. Baker, J. Stannard. *Traffic Accident Investigator's Manual for Police.* Evanston, Illinois: Northwestern University, 1971, pp. 315-388.

Lesson 26 PHOTOGRAPH

Demonstrate photography techniques unique to accident investigation and explain the evidentuary value.

Objectives:

1. Recognize the potential value of photographs in accident scene investigation.
2. By using photographic techniques correctly, collect photographically all pertinent vehicle data at an actual or simulated (mock) traffic accident crash scene.

Application (suggested classroom activities):

1. Using simulated scene of accident, place yourself in proper position to obtain desired photographs.
2. Identify the physical evidence important to be included in the overall accident scene photograph. Calculate the proper focal plane and indicate it on the diagram is indicated on a handout. Indicate on a handout diagram the proper location for the various flashes to illuminate the objects to be photographed.
3. At a mock accident scene, at night, identify physical evidence, calculate the proper focal plane, set up a camera with proper settings, properly illuminate and photograph the site. Evaluate the quality of the developed photograph.
4. Refer to Job Activity Sheet, Assigned Activities, Lesson 26.

Suggested Reading:

1. Baker, J. Stannard. *Traffic Accident Investigator's Manual for Police.* Evanston, Illinois: Northwestern University, 1971, pp. 401-440.

Lesson 27 MAKE SPEED ESTIMATES

Make safe and accurate test skids and demonstrate application of a speed nomograph to calculate the minimum speed.

Objectives:

1. Perform test skids safely to the satisfaction of the instructor at a specified location.
2. Identify and compute radius, superelevation, percent of grade, drag factor, and critical speed of a curve.
3. With reasonable accuracy, calculate with a speed nomograph the minimum speed of an accident vehicle from skidmark, considering the coefficient of friction and the percent of grade, in a variety of simulated accident situations presented by the instructor.

Application (suggested classroom activities):

1. Complete a designated number of test skids on various types of road surfaces.
   a. Record results on a form furnished to you.
   b. Compare results obtained to arrive at an average acceptable to the instructor.

2. Practice the skill of calculating with reasonable accuracy the minimum speed of an accident vehicle using information provided.
3. Using speed nomograph forms conduct the following drill:
   a. Determine average distance of skidmarks and mark distance scale.
   b. Determine average distance of two or three test skidmarks and mark on distance scale.
   c. Determine average of test speeds and mark on speed scale.
   d. Determine coefficient of friction for test skids.
   e. Determine speed of accident vehicle.
   f. Conduct similar drill introducing a percent of grade factor in which test skids were made on level surface.
4. Refer to Job Activity Sheet, Assigned Activities, Lesson 27.

Suggested Reading:

1. Baker, J. Stannard. *Traffic Accident Investigator's Manual for Police.* Evanston, Illinois: Northwestern University, 1971, pp. 505-534.

RECORD

Lesson 28 INTRODUCTION TO METHODS OF RECORDING DATA

Describe the methods used to record data relating to accident investigation.

Objective:

1. Describe the various methods of recording data regarding an accident scene.

Application (suggested classroom activity):

1. Provided with an example of each method of recording data, photograph, field sketch and interview, study each for content in relation to the accident. List points of evidence and data as you analyze each method.

Lesson 29 HOW TO RECORD VIA PHOTOGRAPHY

Explain the value of photography in accident investigation to document and record physical evidence.

Objectives:

1. Demonstrate specific photographic techniques in recording all the applicable physical evidence present at a mock collision scene.
2. Use photographs to document collision areas and physical evidence and retain photographs or negatives to provide a permanent record for reference and research study.

Application (suggested classroom activities):

1. Plan space for negative files and devise identification numbering system for photos and accident case records.
2. Check file envelopes for information data to verify contents and labeling of same.

3. Using either a simulated (mock) accident scene or an authentic accident scene, take designated photographs demonstrating the recording of physical evidence, identify the photographs, demonstrate correct filing procedures, and describe potential uses of them.
4. Refer to Job Activity Sheet, Assigned Activities, Lesson 29.

Suggested Reading:

1. Baker, J. Stannard. *Traffic Accident Investigator's Manual for Police*. Evanston, Illinois: Northwestern University, 1971, pp. 401-440.

Lesson 30 HOW TO RECORD VIA FIELD SKETCHES

Accurately draw scale diagrams of crash scenes from free-hand field sketches and learn the essential principles in scale diagramming.

Objectives:

1. Correctly draw a free-hand sketch of physical evidence from personal observation and from measurements taken from a worksheet of a simulated (mock) accident or an actual accident.
2. Draw an accurate factual sketch of the physical site and of the various forms of physical evidence observed at an accident site.
3. Reconstruct the accident scene by interpreting the factual information on the sketch.

Application (suggested classroom activities):

1. By using coordinate method draw free-hand sketch.
   a. Simple vehicle or object
   b. Two vehicles or objects
2. By using triangulation method draw a free-hand sketch of a single vehicle.
   a. Find reference (landmarks) points and record them.
   b. Show manhole covers, drains, etc.
   c. Show how to fix location of marks by coordination and triangulation.
   d. Measure and record—remeasure and re-record (if enough time)
3. Given a standard accident investigation form, sketch an accident site (and redraw to scale) from a simulated (mock) accident and to label all physical evidence (several when possible).
   a. Work in pairs at first so more points can be observed and brought out. This will make each one more critical as to what to look for.
4. Refer to Job Activity Sheet, Assigned Activities, Lesson 30.

Suggested Reading:

1. Baker, J. Stannard. *Traffic Accident Investigator's Manual for Police*. Evanston, Illinois: Northwestern University, 1971, pp. 337-386; 471-484.

Lesson 31 HOW TO RECORD VIA NOTES FROM INTERVIEWS

Record notes obtained in interviews and document the information.

Objectives:

1. Relate the value of written statements in accident investigation.
2. Demonstrate the procedures for recording information obtained in interviews relating to accidents.

Application (suggested classroom activities):

1. Provided with a taped accident interview session; record the essential data, evaluate data, summarize information, and describe documentation process.
2. Refer to Job Activity Sheet, Assigned Activities, Lesson 31.

Suggested Reading:

1. Baker, J. Stannard. *Traffic Accident Investigator's Manual for Police*. Evanston, Illinois: Northwestern University, 1971, pp. 384-400.

REPORT

Lesson 32 RECONSTRUCTION PRINCIPLES AND CAUSATION ANALYSIS

Understand the purpose of accident reconstruction and causation analysis and be able to recognize pertinent information required for accident reconstruction.

Objectives:

1. Explain the purpose of accident reconstruction and causation analysis as it relates to the accident investigation.
2. Describe the information that is essential to obtain for reconstructing the accident and determining the cause.
3. Perform reconstruction techniques necessary for reporting purposes.

Application (suggested classroom activities):

1. Given one or more accident reconstruction diagrams and reports of an accident, analyze it for content of essential information, clarity, and for future reference of information.
2. Reconstruct for reporting purposes, an accident scene using information supplied by the instructor.
3. Refer to Job Activity Sheet, Assigned Activities, Lesson 32.

Suggested Reading:

1. Baker, J. Stannard. *Traffic Accident Investigator's Manual for Police*. Evanston, Illinois: Northwestern University, 1971, pp. 535-572.

Lesson 33 REPORT THE INVESTIGATION OF AN ACCIDENT

Complete the accident case material and properly record and report all information relating to the accident.

Objectives:

1. Reestablish the three preceding functions: identify, collect, and record and relate these to the reporting function.
2. List the major uses and characteristics of the accident report form.
3. Explain the essential information to be included in the accident report form.

4. Outline an accident report for the intended purpose of selecting relevant material for a written or spoken presentation.

Application (suggested classroom activities):

1. Develop check list, identify and list criteria to be used in evaluating a completed accident report form.
2. Given completed accident reports, evaluate according to determined criteria.
3. Using an instructor-developed outline as a model, develop an outline, and select from resource material provided which is necessary to satisfy the purposes of an assigned report on an investigation of an accident.
4. Schedule a work session under office conditions. Use provided resource material and develop written outline for accident report, determine graphics or visual aids to include and select required materials as note forms and photos to present with the report.
5. Refer to Job Activity Sheet, Assigned Activities, Lesson 33.

Suggested Reading:

1. Baker, J. Stannard. *Traffic Accident Investigator's Manual for Police.* Evanston, Illinois: Northwestern University, 1971, pp. 441-470.

Lesson 34 PREPARE AND PRESENT THE REPORT

Prepare accident report forms using appropriate format and graphic information.

Objectives:

1. Write a narrative style report for an intended purpose which follows a prepared outline and effectively incorporates graphic and visual materials.
2. Orally report the investigation of a highway traffic accident.

Application (suggested classroom activities):

1. Provide students with a copy of a written report and have them analyze for content and against designated criteria.
2. Provide students with an approved outline of a report and previously selected resource material and file items and have students write a narrative style report as if intended for duplication and dissemination.
3. Play selected portions of a tape of an oral report and have students analyze it in regard to points made and techniques used.
4. Have students present a three to five minute report of an investigation of an accident. Record and play back to analyze results. Content will be derived from the outline prepared in the previous lesson.
5. Refer to Job Activity Sheet, Assigned Activities, Lesson 34.

Suggested Reading:

1. Baker, J. Stannard. *Traffic Accident Investigator's Manual for Police.* Evanston, Illinois: Northwestern University, 1971, pp. 441-470.

Lesson 35 SIMULATED (MOCK) TRAFFIC ACCIDENT INVESTIGATION

Reproduce the accident scene by recording all the evidence and reconstructing what occurred.

Objective:

1. Conduct a minimum of three accident site investigations of increasing difficulty by applying knowledge and skills acquired in the entire couse to simulated (mock) traffic crash sites with complete accuracy compared to the instructor's master investigation.

Application (suggested classroom activity):

1. Conduct the required simulated (mock) accident investigations without error.

Highway Traffic Accident Investigation and Reporting:
Job Activity Sheet

Student Name: _____
Instructor: _____
Institution: _____

Lesson Title: Assigned Activities	Student Description of Activity as performed (attached necessary evidence)	Date Completed	Instructor Comments and Evaluation
Lesson 1: HIGHWAY TRANSPORTATION SYSTEM 1. Obtain information and brochures on highway transportation system and highway safety from your state and local community personnel. 2. Obtain and read annual state traffic accident report from Governor's Highway Safety Representative 3. Obtain States annual program for implementing Safety Standard number 18—from Governor's Highway Safety Representative and summarize. 4. Other activities.			

Highway Traffic Accident Investigation and Reporting:
Job Activity Sheet

Student Name: _____
Instructor: _____
Institution: _____

Lesson Title: Assigned Activities	Student Description of Activity as performed (attached necessary evidence)	Date Completed	Instructor Comments and Evaluation
Lesson 2: PURPOSES, RESPONSIBILITIES, AND OBJECTIVES OF THE ACCIDENT INVESTIGATOR			
1. Meet with one or more practicing accident investigation technician and discuss their job activities, problem areas, etc.			
2. Other activities.			

Highway Traffic Accident Investigation and Reporting:
Job Activity Sheet

Student Name: _____
Instructor: _____
Institution: _____

Lesson Title: Assigned Activities	Student Description of Activity as performed (attached necessary evidence)	Date Completed	Instructor Comments and Evaluation
Lesson 3: PLAN THE INVESTIGATION			
1. Plan the investigation in observing an actual accident and submit a plan to be carried out in conducting the investigation.			
2. Other activities.			

Highway Traffic Accident Investigation and Reporting:
Job Activity Sheet

Student Name: _____
Instructor: _____
Institution: _____

Lesson Title: Assigned Activities	Student Description of Activity as performed (attached necessary evidence)	Date Completed	Instructor Comments and Evaluation
Lesson 4: DEFINITIONS AND CLASSIFICATIONS 1. Prepare the exercises in the Training Manual No. 2, "Exercise in Classifying Motor Vehicle Trafficway Accident." (See Bibliography) 2. Other activities.			

Highway Traffic Accident Investigation and Reporting:
Job Activity Sheet

Student Name: _____
Instructor: _____
Institution: _____

Lesson Title: Assigned Activities	Student Description of Activity as performed (attached necessary evidence)	Date Completed	Instructor Comments and Evaluation
Lesson 5: IDENTIFY THE DRIVER (S) 1. Accompany a practicing investigator, make personal observations, and write a critique of the method used in identifying the driver (s). 2. Other activities.			

Highway Traffic Accident Investigation and Reporting:
Job Activity Sheet

Student Name: _____
Instructor: _____
Institution: _____

Lesson Title: Assigned Activities	Student Description of Activity as performed (attached necessary evidence)	Date Completed	Instructor Comments and Evaluation
Lesson 6: IDENTIFY PRE-CRASH CONDITIONS OF THE DRIVER WITH REFERENCE TO ALCOHOL/DRUGS			
1. Conduct tests on a designated number of subjects at various blood alcohol levels and document the tests and the results. Examples: a. Balance test b. Finger to nose test c. Walking and turning test d. Coin test			
2. Other activities			

Highway Traffic Accident Investigation and Reporting:
Job Activity Sheet

Student Name: _____
Instructor: _____
Institution: _____

Lesson Title: Assigned Activities	Student Description of Activity as performed (attached necessary evidence)	Date Completed	Instructor Comments and Evaluation
Lesson 8: IDENTIFY BEHAVIORS AS DRIVER PERSONALITY AND ATTITUDE			
1. Keep a record of personal situations as they reflect attitudes and personality in relation to driving.			
2. Ride with three different drivers whom you know to have diverse personalities. Record their driving reactions in designated and similar situations.			
3. Other activities.			

Highway Traffic Accident Investigation and Reporting:
Job Activity Sheet

Student Name: _____
Instructor: _____
Institution: _____

Lesson Title: Assigned Activities	Student Description of Activity as performed (attached necessary evidence)	Date Completed	Instructor Comments and Evaluation
Lesson 9: IDENTIFY NATURAL ABILITIES OF THE DRIVER 1. Conduct designated reaction tests on at least five others (students) chart and demonstrate individual differences in these subjects. 2. Other activities.			

Highway Traffic Accident Investigation and Reporting:
Job Activity Sheet

Student Name: _____
Instructor: _____
Institution: _____

Lesson Title: Assigned Activities	Student Description of Activity as performed (attached necessary evidence)	Date Completed	Instructor Comments and Evaluation
Lesson 10: IDENTIFY LEARNED CAPABILITIES OF THE DRIVER			
1. Observe the driving of another person, identify and document the learned capabilities and deficiencies.			
2. Review the local and/or state accident report forms to determine what types of information are currently being collected regarding learned capabilities of drivers and how the information is utilized in the prevention of accidents.			
3. Spend a designated amount of out-of-class time with a driver education instructor in a simulation laboratory to learn how people learn to drive and observe learned capabilities of new drivers.			
4. Other activities.			

Highway Traffic Accident Investigation and Reporting:
Job Activity Sheet

Student Name: _____
Instructor: _____
Institution: _____

Lesson Title: Assigned Activities	Student Description of Activity as performed (attached necessary evidence)	Date Completed	Instructor Comments and Evaluation
Lesson 12: IDENTIFY VEHICLE TYPES AND COMPONENTS 1. Visit a garage and discuss with a service manager the salient points of vehicle maintenance for the prevention of accidents. Alternatives to visiting a garage might be an auto mechanics class at a community college or technical school or a state vehicle inspection station. 2. Visit a garage or service station and preview their service manuals and identify designated components as specified by your instructor on three different makes of cars. 3. Other activities.			

Highway Traffic Accident Investigation and Reporting:
Job Activity Sheet

Student Name: _____
Instructor: _____
Institution: _____

Lesson Title: Assigned Activities	Student Description of Activity as performed (attached necessary evidence)	Date Completed	Instructor Comments and Evaluation
Lesson 13: IDENTIFY PRE-CRASH, CRASH, AND POST-CRASH VEHICLE DAMAGE AND DEFECTS			
1. Analyze a designated number of damaged vehicles for the purpose of identifying contact and induced damage and distinguish between multiple impacts.			
2. Other activities.			

Highway Traffic Accident Investigation and Reporting:
Job Activity Sheet

Student Name: _____
Instructor: _____
Institution: _____

Lesson Title: Assigned Activities	Student Description of Activity as performed (attached necessary evidence)	Date Completed	Instructor Comments and Evaluation
Lesson 14: IDENTIFY FOR SOURCES OF INJURY TO OCCUPANTS AND OR PEDESTRIANS			
1. Through investigation, examine and identify the components of a motor vehicle which were responsible for the death or injury to occupants or pedestrians in a motor vehicle accident.			
2. Other activities.			

Highway Traffic Accident Investigation and Reporting:
Job Activity Sheet

Student Name: _____
Instructor: _____
Institution: _____

Lesson Title: Assigned Activities	Student Description of Activity as performed (attached necessary evidence)	Date Completed	Instructor Comments and Evaluation
Lesson 16: IDENTIFY PRE-CRASH MARKS ON THE ROADWAY, SHOULDER, AND ENVIRONMENT 1. Identify through photography the following types of pre-crash marks as found on the roadway/highway: a. Skidmark b. Scuffmark c. Centrifugal skidmark d. Impending skidmark e. Tire shadowmark f. Furrow g. Squeegee mark h. Erasure mark i. Overlapping skidmark j. Skips k. Test skids 2. Other activities.			

Highway Traffic Accident Investigation and Reporting:
Job Activity Sheet

Student Name: _____
Instructor: _____
Institution: _____

Lesson Title: Assigned Activities	Student Description of Activity as performed (attached necessary evidence)	Date Completed	Instructor Comments and Evaluation
Lesson 17: IDENTIFY POSITION AND ANGLE OF INFLICTION			
1. Select a designated number of accident vehicles, photograph the damage, and in a written report describe the position and angle of infliction.			
2. Other activities.			

Highway Traffic Accident Investigation and Reporting:
Job Activity Sheet

Student Name: _____
Instructor: _____
Institution: _____

Lesson Title: Assigned Activities	Student Description of Activity as performed (attached necessary evidence)	Date Completed	Instructor Comments and Evaluation
Lesson 18: IDENTIFY DEBRIS 1. Photograph, label, and describe debris at an accident and its relation to the vehicles involved and use in determining: a. point of impact b. maximum engagement c. final resting place			
2. Other activities.			

Highway Traffic Accident Investigation and Reporting:
Job Activity Sheet

Student Name: _____
Instructor: _____
Institution: _____

Lesson Title: Assigned Activities	Student Description of Activity as performed (attached necessary evidence)	Date Completed	Instructor Comments and Evaluation
Lesson 19: IDENTIFY VEHICLE PARTS WITH CRASH MARKS ON THE ROADWAY AND SURROUNDING ENVIRONMENT			
1. Identify, photograph, sketch, and describe crash marks on the roadway and environment and describe their relationship to the accident			
2. Other activities.			

Highway Traffic Accident Investigation and Reporting:
Job Activity Sheet

Student Name: _____
Instructor: _____
Institution: _____

Lesson Title: Assigned Activities	Student Description of Activity as performed (attached necessary evidence)	Date Completed	Instructor Comments and Evaluation
Lesson 20: IDENTIFY AREA OF IMPACT FROM MARKS ON THE ROADWAY 1. Record through photography or sketching a specified number of accidents and designate the area of impact for each. 2. Provide the necessary documented evidence to support the decision. 3. Other activities.			

Highway Traffic Accident Investigation and Reporting:
Job Activity Sheet

Student Name: _____
Instructor: _____
Institution: _____

Lesson Title: Assigned Activities	Student Description of Activity as performed (attached necessary evidence)	Date Completed	Instructor Comments and Evaluation
Lesson 21: IDENTIFY POST-CRASH ROADWAY MARKS IN RELATION TO THE ACCIDENT			
1. Prepare a designated number of sketches supported with evidence identifying post-crash roadway marks and their relationship to the accident.			
2. Other activities.			

Highway Traffic Accident Investigation and Reporting:
Job Activity Sheet

Student Name: _____
Instructor: _____
Institution: _____

Lesson Title: Assigned Activities	Student Description of Activity as performed (attached necessary evidence)	Date Completed	Instructor Comments and Evaluation
Lesson 22: PRE-CRASH AND POST-CRASH ACTIONS AND REACTIONS 1. Submit in narrative form the reconstruction of the crash from the first point of perception to the final position of the involved vehicles.			
2. Other activities.			

Highway Traffic Accident Investigation and Reporting:
Job Activity Sheet

Student Name: _____
Instructor: _____
Institution: _____

Lesson Title: Assigned Activities	Student Description of Activity as performed (attached'necessary evidence)	Date Completed	Instructor Comments and Evaluation
Lesson 23: INTERVIEW 1. Demonstrate the techniques for interviewing witnesses using a simulated (mock) accident situation. Interview a driver and two witnesses at an accident scene, summarize interview, and present a written narrative of the conclusion. 2. Other activities.			

Highway Traffic Accident Investigation and Reporting:
Job Activity Sheet

Student Name: _____
Instructor: _____
Institution: _____

Lesson Title: Assigned Activities	Student Description of Activity as performed (attached necessary evidence)	Date Completed	Instructor Comments and Evaluation
Lesson 24: COLLECT AND PRESERVE PHYSICAL EVDENCE			
1. Collect, label, and preserve physical evidence from an actual or simulated accident and present findings to instructor in a written report and/or develop a display to illustrate findings.			
2. Other activities.			

Highway Traffic Accident Investigation and Reporting:
Job Activity Sheet

Student Name: _____
Instructor: _____
Institution: _____

Lesson Title: Assigned Activities	Student Description of Activity as performed (attached necessary evidence)	Date Completed	Instructor Comments and Evaluation
Lesson 25: MAKE RELOCATION MEASUREMENTS 1. Submit a field sketch to class using each of the three methods a. coordinate b. triangulation c. reference point 2. Other activities.			

Highway Traffic Accident Investigation and Reporting:
Job Activity Sheet

Student Name: _____
Instructor: _____
Institution: _____

Lesson Title: Assigned Activities	Student Description of Activity as performed (attached necessary evidence)	Date Completed	Instructor Comments and Evaluation
Lesson 26: PHOTOGRAPH 1. Submit photographs of actual accident scenes illustrating: a. calculation of the focal plane b. use of illumination c. nighttime photography d. daytime accidents involving 1. one car 2. two cars 3. three or more cars 2. Other activities.			

Highway Traffic Accident Investigation and Reporting:
Job Activity Sheet

Student Name: _____
Instructor: _____
Institution: _____

Lesson Title: Assigned Activities	Student Description of Activity as performed (attached necessary evidence)	Date Completed	Instructor Comments and Evaluation
Lesson 27: MAKE SPEED ESTIMATES			
1. Conduct a designated number of speed tests and prepare results demonstrating the correct use of the nomograph.			
2. Other activities.			

Highway Traffic Accident Investigation and Reporting:
Job Activity Sheet

Student Name: _____
Instructor: _____
Institution: _____

Lesson Title: Assigned Activities	Student Description of Activity as performed (attached necessary evidence)	Date Completed	Instructor Comments and Evaluation
Lesson 29: HOW TO RECORD VIA PHOTOGRAPHY 1. Prepare a set of photographs of an accident to: a. document collision area b. show physical evidence c. document for permanent records d. correctly identify 2. Other activities.			

Highway Traffic Accident Investigation and Reporting:
Job Activity Sheet

Student Name: _____
Instructor: _____
Institution: _____

Lesson Title: Assigned Activities	Student Description of Activity as performed (attached necessary evidence)	Date Completed	Instructor Comments and Evaluation
Lesson 30: HOW TO RECORD VIA FIELD SKETCHES 1. Sketch an accident at the scene; using sketch, prepare a scale diagram using a traffic template. 2. Take a written description of an accident scene, as provided by the instructor, and sketch a diagram of the accident scene. 3. Other activities.			

Highway Traffic Accident Investigation and Reporting:
Job Activity Sheet

Student Name: _____
Instructor: _____
Institution: _____

Lesson Title: Assigned Activities	Student Description of Activity as performed (attached necessary evidence)	Date Completed	Instructor Comments and Evaluation
Lesson 31: HOW TO RECORD VIA NOTES FROM INTERVIEW			
1. Using a tape of a simulated interview regarding an accident, make appropriate notes.			
2. Through listening to two recorded interviews regarding actual accidents, list the key information necessary to record during an interview.			
3. Other activities.			

Highway Traffic Accident Investigation and Reporting:
Job Activity Sheet

Student Name: _____
Instructor: _____
Institution: _____

Lesson Title: Assigned Activities	Student Description of Activity as performed (attached necessary evidence)	Date Completed	Instructor Comments and Evaluation
Lesson 32: RECONSTRUCTION PRINCIPLES AND CAUSATION ANALYSIS			
1. Using data from an accident report reconstruct an accident, and present findings to an instructor.			
2. Other activities.			

Highway Traffic Accident Investigation and Reporting:
Job Activity Sheet

Student Name: _____
Instructor: _____
Institution: _____

Lesson Title: Assigned Activities	Student Description of Activity as performed (attached necessary evidence)	Date Completed	Instructor Comments and Evaluation
Lesson 33: REPORT THE INVESTIGATION OF AN ACCIDENT			
1. Using an actual accident scene, identify, collect, and record all pertinent information from the accident.			
2. Other activities.			

Highway Traffic Accident Investigation and Reporting:
Job Activity Sheet

Student Name: _____
Instructor: _____
Institution: _____

Lesson Title: Assigned Activities	Student Description of Activity as performed (attached necessary evidence)	Date Completed	Instructor Comments and Evaluation
Lesson 34; PREPARE AND PRESENT THE REPORT 1. Prepare a written report and present it orally to your class for them to critique the content of the information as it relates to the accident. 2. Fill out a report form for an actual accident in a completed stage for submission for filing. 3. Other activities.			

APPENDIX

HIGHWAY SAFETY PROGRAM STANDARD NO. 18

Accident Investigation and Reporting U.S. Department of Transportation National Highway Traffic Safety Administration

I. *Scope.* This standard establishes minimum requirements for a State highway safety program for accident investigation and reporting.

II. *Purpose.* The purpose of this standard is to establish a uniform, comprehensive motor vehicle traffic accident investigation program for gathering information — who, what, when, where, why and how — on motor vehicle traffic accidents and associated deaths, injuries, and property damage; and entering the information into the traffic records system for use in planning, evaluating, and furthering highway safety program goals.

III. *Definitions.* For the purpose of this standard the following definitions apply:

Accident — an unintended event resulting in injury or damage, involving one or more motor vehicles on a highway that is publicly maintained and open to the public for vehicular travel.

Highway — the entire width between the boundary lines of every way publicly maintained when any part thereof is open to the use of the public for purposes of vehicular travel.

Motor vehicle — any vehicle driven or drawn by mechanical power manufactured primarily for use on the public streets, roads, and highways, except any vehicle operated exclusively on a rail or rails.

IV. *Requirements.* Each State, in cooperation with its political subdivisions, shall have an accident investigation program meeting the requirements established herein.

A. *Administration.* 1. There shall be a State agency having primary responsibility for administration and supervision of storing and processing accident information, and providing information needed by user agencies.

2. There shall be employed at all levels of government adequate numbers of personnel, properly trained and qualified, to conduct accident investigation and process the resulting information.

3. Nothing in this standard shall preclude the use of other than police officers, in carrying out the requirements of this standard in accordance with laws and policies established by State and/or local governments.

4. Procedures shall be established to assure coordination, cooperation, and exchange of information among local, State, and Federal agencies having responsibility for the investigation of accidents and subsequent processing of resulting data.

5. Each State shall establish procedures for entering accident information into the statewide traffic records system established pursuant to Highway Safety Program Standard No. 10, Traffic Records, and for assuring uniformity and compatibility of this data with the requirements of the system, including as a minimum:

a. Use of uniform definitions and classifications acceptable to the National Highway Traffic Safety Administration and identified in the Highway Safety Program Manual.

b. A standard format for input of data into the statewide traffic records system.

c. Entry into the statewide traffic records system of information gathered and submitted to the responsible State agency.

B. *Accident reporting.* Each State shall establish procedures which require the reporting of accidents to the responsbile State agency within a reasonable time after occurrence.

C. *Owner and driver reports.* 1. In accidents involving only property damage, where the vehicle can be normally and safely driven away from the scene, the drivers or owners of vehicles involved shall be required to submit a written report consistent with State reporting requirements, to the responsible State agency. A vehicle shall be considered capable of being normally and safely driven if it does not require towing and can be operated under its own power, in its customary manner, without further damage or hazard to itself, other traffic elements, or the roadway. Each report so submitted shall include, as a minimum, the following information relating to the accident:

a. Location.
b. Time.
c. Identification of driver(s).
d. Identification of pedestrian(s), passenger(s), or pedal-cyclist(s).
e. Identification of vehicle(s).
f. Direction of travel of each unit.
g. Other property involved.
h. Environmental conditions existing at the time of the accident.
i. A narrative description of the events and circumstances leading up to the time of impact, and immediately after impact.

2. In all other accidents, the drivers or owners of motor vehicles involved shall be required to immediately notify the police of the jurisdiction in which the accident occurred. This includes, but is not limited to accidents involving: (1) fatal or nonfatal personal injury, or (2) damage to the extent that any motor vehicle involved cannot be driven under its own power, in its customary manner, without further damage or hazard to itself, other traffic elements, or the roadway, and therefore requires towing.

D. *Accident investigation.* Each State shall establish a plan for accident investigation and reporting which shall meet the following criteria:

1. Police investigation shall be conducted of all accidents as identified in section IV.C.2 above. Information gathered shall be consistent with the police mission of detecting and apprehending law violators, and shall include, as a minimum, the following:

a. Violation(s), if any occurred, cited by section and subsection, numbers and/titles of the State code, that (1) contributed to the accident where the investigating officer has reason to believe that violations were committed regardless of whether the officer has sufficient evidence to prove the violation(s); and (2) for which the driver was arrested or cited.

c. Information, collected in accordance with the program established under Highway Safety Program Standard No. 15, Police Traffic Services, section I-D, relating to human, vehicular, and highway factors causing individual accidents, injuries, and deaths, including failure to use safety belts.

2. Accident investigation teams shall be established, representing different interest areas, such as police; traffic; highway and automotive engineering; medical, behavioral, and social sciences. Data gathered by each member of the investigation team should be consistent with the mission of the member's agency, and should be for the purpose of determining probable causes of accident, injuries, and deaths. These teams shall conduct investigations of an appropriate sampling of accidents in which there were one or more of the following conditions:

a. Locations that have a similarity of design, traffic engineering characteristics, or environmental conditions, and that have a significantly large or disproportionate number of accidents.

b. Motor vehicles or motor vehicle parts that are involved in a significantly large or disproportionate number of accidents or injury-producing accidents.

c. Drivers, pedestrians, and vehicle occupants of a particular age, sex, or other grouping, who are involved in a significantly large or disproportionate number of motor vehicle traffic accidents or injuries.

d. Accidents in which causation or the resulting injuries and property damage are not readily explainable in terms of conditions or circumstances that prevailed.

e. Other factors that concern State and national emphasis programs.

V. *Evaluation.* The program shall be evaluated at least annually by the State. Substance of the evaluation report shall be guided by Chapter V of the Highway Safety Program Manual. The National Highway Traffic Safety Administration shall be provided with a copy of the evaluation report.

SURVEY Q3R METHOD*

These five steps of the Survey Q3R Method—Survey, Question, Read, Recite, and Review—when polished into a smooth and efficient method should result in the student reading faster, picking out the important points, and fixing them in memory.

The title for this study skill is abbreviated in the current fashion to make it easier to remember and to make reference to it more simple. The symbols Survey Q3R stand for the steps which the student follows in using the method; a description of each of these steps follows.

Survey . . . . . 1. Glance over the headings in the chapter to see the few big points that will be developed. Also read the final summary paragraph if the chapter has one. This survey should not take more than a minute and will show the three to six core ideas around which the discussion will cluster. This orientation will help you organize the ideas as you read them later.

Question . . . 2. Now begin to work. Turn the first heading into a question. This will arouse your curiosity and thereby increase comprehension. It will bring to mind information already known, thus helping you to understand that section more quickly. The question also will make important points stand out at the same time that explanatory detail is recognized as such. Turning a heading into a question can be done on the instant of reading the heading, but it demands a conscious effort on the part of the reader to make this a query for which he must read to find the answer.

Read . . . . . 3. Read to answer that question, i.e., to the end of the first headed section. This is not a passive plodding along each line, but an active search for the answer.

Recite . . . . . 4. Having read the first section, look away from the book and try briefly to recite the answer to your question. Use your own words and cite an example. If you can do this you know what is in the book; if you can't, glance over the section again. An excellent way to do this reciting from memory is to jot down cue phrases in outline form on a sheet of paper.

Now repeat Steps 2, 3, and 4 on each succeeding headed section: that is, turn the next heading into a question, read to answer that question, and recite the answer by jotting down cue phrases in your outline. Read in this way until the entire lesson is completed.

Review . . . . 5. When the lesson has thus been read through, look over your notes to get a bird's-eye view of the points and their relationship and check your memory as to the content by reciting the major subpoints under each heading. This checking of memory can be done by covering up the notes and trying to recall the main points. Then expose each major point and try to recall the subpoints listed under it.

* From *Effective Study*, 4th Edition, by Francis P. Robinson, Copyright 1941, 1946 by Harper & Row, Publishers, Inc. Copyright 1961, 1970 by Francis P. Robinson. By permission of the publishers.

STUDENT OPINION OF TEACHING AND COURSE*

Date _____
Instructor _____

Characteristics of the Instructor

Each of the items below deals with a characteristic of instructors which students feel to be important. Indicate your rating of your instructor by a check at the appropriate point on the scale. The exact point at which you rate is less important than the general impression.

Example:

NOT HELPFUL _____ ACTIVELY HELPFUL

Write in after the question any additional comments that you wish to make. Give examples wherever possible.

1. Is the instructor actively helpful when students have difficulty?

NOT HELPFUL _____ ACTIVELY HELPFUL

Examples or Comments:

2. Does the instructor appear sensitive to students' feelings and problems?

UNAWARE _____ RESPONSIVE

Examples or Comments:

3. Is the instructor flexible?

RIGID _____ FLEXIBLE

Example or Comments:

4. Does the instructor make students feel free to ask questions, disagree, express their ideas, etc.?

INTOLERANT _____ ENCOURAGES STUDENT IDEAS

Example or Comments:

.....

* Adapted from: Wilbert J. McKeachie, *Teaching Tips, A Guidebook for the Beginning College Teacher* (Lexington, Mass.: D. C. Heath and Company, 1969), pp. 247-252.

Based on an evaluation form used by the Department of Psychology at the University of Michigan.

5. Is the instructor fair and impartial in his dealings with the students?

FAVOR SOME — FAIR

Examples or Comments:

6. Is the instructor's speech adequate for teaching?

UNINTELLIGIBLE — GOOD

Example or Comments: (Volume, Tone, Enunciation, Rate, Vocabulary, etc.)

7. Does the instructor belittle students?

BELITTLES — RESPECTS

Example or Comments:

8. Does the instructor tell students when they have done particularly well?

NEVER — ALWAYS

Example or Comments:

9. Does the instructor dwell upon the obvious?

DWELLS ON OBVIOUS — *INTRODUCES INTERESTING IDEAS*

Example or Comments

10. Is the instructor interested in the subject of accident investigation?

SEEMS UNINTERESTED — *SEEMS INTERESTED*

Example or Comments

11. Does the instructor use enough examples or illustrations to clarify the material?

NONE — *MANY*

Example or Comments:

12 Does the instructor present material in a well-organized fashion?

DISORGANIZED — *WELL-ORGANIZED*

Example or Comments

13. Does the instructor follow an outline or a lesson plan to accomplish objectives?

NOT AT ALL — *VERY CLOSELY*

Example or Comments:

14. Does the instructor stimulate thinking?

DULL — *STIMULATING*

Example or Comments:

15. Does the instructor put his material across in an interesting way?

DULL — *VERY INTERESTING*

Example or Comments:

16. Other important characteristics—please specify.

Considering all of the above qualities which are applicable (including those that you added) how would you rate this instructor? (Circle your rating).

EXCELLENT VERY GOOD GOOD FAIR POOR VERY BAD

Now go back over the list and place a check (X) before the five items which were most important to you in making your judgment.

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